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MEMORANDUM FOR: Dan Hoydysh
Director, Office of Technology
and Policy Analysis
Department of Commerce

FROM: [REDACTED]
Chief, East European Division
Office of European Analysis

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SUBJECT: East European Interest in US Aircraft:
Distinctions between the Boeing 737-200
and 737-300

The Boeing 737-300 and older model 737-200 are both subject to COCOM controls, but the 737-300 contains the following more advanced technologies:

- o Advanced avionics. The 737-300 offers electronic cockpit display equipment instead of the conventional gauges used in the model 200. In addition, the 737-300 embodies a computer-operated inertial navigation system with ring laser gyros, which are much more accurate, reliable, and flexible than previous technologies. Jane's
- o Advanced engine. The model 300 possesses a CFM56-3 engine, a high-bypass turbofan with better fuel efficiency than the older JT8D engine found in the 737-200. Furthermore, the 737-300's engine employs a full-authority digital control system, which improves fuel efficiency even further. Jane's

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The 737-200 and 737-300 are similar in most other respects. Both are short-range aircraft (3000 to 5000 km) with comparable passenger capacity: the model 200 holds 115 to 130 passengers, and the model 300 carries 110 to 149 passengers. [redacted] *Jane's*

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Technology loss could result from reverse engineering of the sensitive technologies embodied in both models of the 737. Access to the equipment could occur to a limited extent when the aircraft is idle between flights or grounded for maintenance. Further, a single aircraft could be purchased with the express intent of dismantling it and its subsystems in order to reverse engineer selected components. However, the Bloc already has access to many of these technologies through Western aircraft sales to several client states, such as Ethiopia and Afghanistan. [redacted]

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Establishment of a maintenance facility in Eastern Europe and stockpiling spare parts and equipment could provide the Bloc significant access to the restricted technologies. This risk probably would not arise while the aircraft were being leased under a lease-purchase agreement because maintenance would still be performed in the West. We believe, however, that Eastern Europe probably would want to purchase a full-scale, locally operated turnkey-type regional service center with Western-trained employees by the time it had full ownership of the aircraft. [redacted]

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As a part of any contract, the West could require the following provisions that would afford some protection to the controlled technology.

- o Controls on the quantities and types of equipment exported to the Bloc would prevent stockpiling of parts and minimize the loss of sensitive hardware. Spare parts exclusive of the controlled commodities could be provided for a limited maintenance installation located in the Bloc.
- o Any maintenance required on the restricted equipment could be performed either in Western Europe or in the United States as part of a scheduled service routine.
- o The manufacturer could provide emergency maintenance when the aircraft is in a location without access to the needed spare parts.

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Implementation of these procedures plus a strict accounting procedure to keep track of the restricted equipment would reduce the risk of technology loss to the Bloc.

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